

New Instruments.

A TEST OF WILSON'S CYRTOMETER.

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Extract from a Thesis, to which honorable mention was accorded, presented to the faculty of the medical department of the University of Buffalo in Jan., 1889.

The cyrtometer was designed for the purpose of locating the position of the fissure of Rolando on the living head. It is described as follows:

"The instrument consists of three strips of flexible metal and a taper (D, Fig. 1) for securing it *in situ* (Fig. 1). The

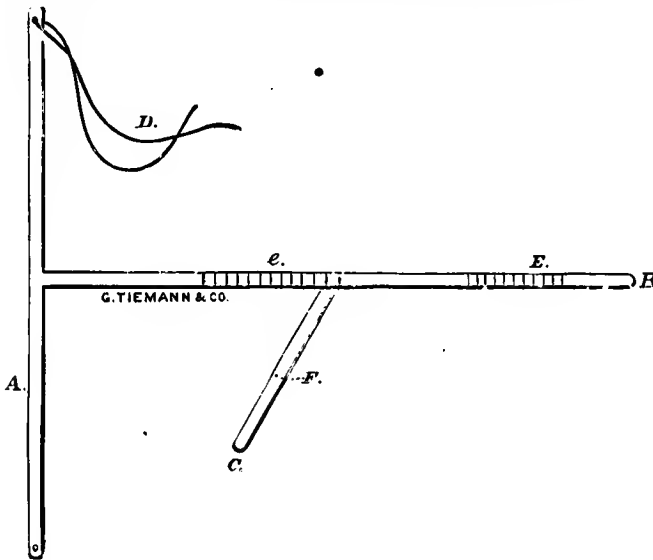


FIG. 1.—The Cyrtometer.

broadest transverse strip (A, Figs. 1 and 2) passes coronally round the forehead, corresponding with the glabella and the external angular process (C and e a p, Fig. 2); the narrower longitudinal strip (B, Figs. 1 and 2) passes backwards from the glabella in the middle line to the occiput. This strip is marked with two scales of letters: capitals in its posterior fourth, and small letters about the middle of the strip (E, e, Fig. 1).

"Measured from the glabella backwards, the distance to any given small letter is 55.7 per cent. of the distance from the glabella to the corresponding capital letter; thus, when

any capital letter falls directly over the inion, the corresponding small letter will coincide with the top of the fissure, A third narrow reversible strip (C, Figs. 1 and 2) slides on the longitudinal slip, making an angle of 67° , open-

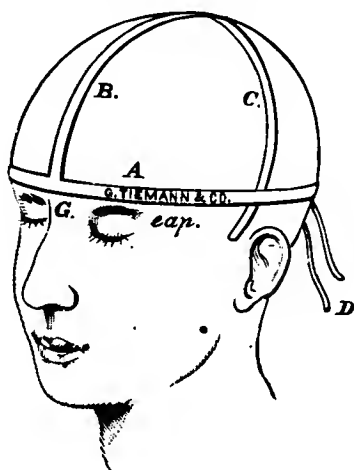


FIG. 2.—The Cytrometer in position.

ing forwards, and marked at $3\frac{3}{4}$ inches from its attached end (F, Fig. 1), thus giving the length and direction of the fissure on the surface of the head.”¹

The following are the scales :

CAPITALS.			SMALL LETTERS.		
<i>Inches from glabella.</i>			<i>Inches from glabella.</i>		
A (11.5)	-	-	a (6.4)	-	-
B (12)	-	-	b (6.6)	-	-
C (12.5)	-	-	c (6.9)	-	-
D (13)	-	-	d (7.2)	-	-
E (13.5)	-	-	e (7.5)	-	-
F (14)	-	-	f (7.7)	-	-
G (14.5)	-	-	g (8)	-	-

The cytrometer used by me differed a little from the above. It was made of elastic metal ribbon, such as is used for clock-springs, without a tape, its own elasticity being enough to keep it in position. For this idea I am indebted to Dr. Roswell Park, who was then, and is now, doing considerable surgery of the brain.²

¹ Hare, *Lancet*, 1889.

² Park, pamphlet, “Surgery of the Brain, based on the Principles of Cerebral Localization.”

I applied the cyrtometer to eight heads. The following programme being carried out in each case:

First. The hair was removed from scalp.

Second. Cyrtometer was applied over bare scalp. The indicated position of fissure was then marked on brain by pieces of wood thrust through drill hole in skull wall.

Third. Scalp and calvarium removed. Brain examined to see how near indicated position of fissure approached fissure. Length of fissure taken.

TABLE OF MEASUREMENTS.

<i>Case.</i>	<i>Sex.</i>	<i>Distance from glabella toinion.</i>	<i>Distance from glabella to top of fissure.</i>	<i>Location.</i>	<i>Length of fissure.</i>
1.....	Female.	12.25 in.	6.8 in.	Over fissure.	3.5 in.
2.....	Female.	12.25 "	6.8 "	$\frac{1}{4}$ inch behind fissure.	4 "
3.....	Male.	12.25 "	6.8 "	$\frac{1}{8}$ inch behind fissure.	4 "
4.....	Male.	14 "	7.7 "	Over fissure.	3.75 "
5.....	Male.	13 "	7.2 "	$\frac{1}{8}$ inch behind fissure.	3.75 "
6....	Male.	12.5 "	6.9 "	Over fissure.	3.75 "
7.....	Male.	12.5 "	6.9 "	Over fissure.	3.75 "
8.....	Female.	12.5 "	6.9 "	Over fissure.	3.5 "

In three (all male) the cyrtometer was absolutely correct.

In two (both female) correct in all but length.

In one (male) one-eighth inch behind fissure. Length correct.

In one (male) one-eighth inch behind fissure. One-fourth inch shorter than fissure.

In one (female) one-fourth inch behind fissure. One-fourth inch shorter than fissure.

In not one did the fissure of Rolando open into the fissure of Sylvius;³ neither was there found a convolution bridging the fissure of Rolando.⁴

Of the various methods proposed for locating the fissure of Rolando, I think Mr. Hare's the best, for these reasons:

First. The cyrtometer is quickly applied and easily retains its place. There are no planes to determine, no lines to draw, and but two landmarks are necessary.

Second. It is as correct as any method can be in the present fashion of heads. Its errors are small, and when they occur need not be feared. I would advise its use.

³ Turner. ⁴ Féré.